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A New Fish-louse found on the Mackerel-pike*

With 1 Text-figure

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(Communicated by Y. OKADA)

A new fish-louse described below was a parasite of the mackerel-pike, *Cololabis saira* (Brevoort), examined at the fish-market at Owase, Mie Prefecture, last autumn. Despite my examination of hundreds of the pikes, only a single louse attached to the outside of the gill operculum came to my hand, the rest of the specimens having been found among the scales stript from the pikes' bodies and accumulated on the floor of the market.

Caligus fulvipurpureus n. sp.

36 females and 2 males preserved in Mie Prefectural University. Ground color pale straw yellow, heavily spotted with dark brown to purplish pigment, and to the naked eye appearing brownish purple. Pigment spots extend even into the appendages.

Holotype: Female (Fig. 1, A-G). 6.24 mm × 2.14 mm (exclusive of caudal rami), egg strings 6.15 mm long. Carapace 4/9 as long as body, longer than wide, obovate, with evenly round sides. Lunules moderately large. Cephalic area shorter than thoracic area, with eye at about the centre. Transverse groove arched, longitudinal ones divergent both forwards and backwards. Median lobe trapezoid, with curved, inclined sides and truncate hind border, and projecting for half its length beyond lateral lobes. Fourth thoracic segment short, 1/3 as wide as carapace,

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contracted in front and fused in back with succeeding segment, from which it is demarked merely by lateral incisions. Genital segment swollen into an enormous rectangle, almost as wide and as long as carapace; sides nearly parallel, making well-rounded anterior angles, posterior border reentrant, developing short, blunt, lateral lobes. Abdomen elongate, $\frac{2}{3}$ as long as genital segment and as wide as 4th thoracic. It is contracted in front where it joins the former, but expands abruptly to its full width, tapering then gradually backwards. Egg strings almost as long as entire body.

Second antennae as usual, with long hook-like claw. First maxillae small, unguiform, curved only slightly. Second maxillipeds with fusiform palm to whose center the finger reaches. Sternal furca with parallel branches, terminating in blunt apices and with an oblong base. First legs with 4 slender terminal spines; innermost of these twice as long as others which are subequal and middle 2 of which are bifid. Fourth legs 3-jointed, with 3 spines on apical joint and 1 on the succeeding; each of these associated at the base with an oval, pectinate lamina. Genital segment has a plumose spinule on each posterior lobe on ventral face close to extreme margin, and a group of 2 shorter spinules internally; whether they may represent 5th leg rudiment is not certain. Caudal rami short, with 3 plumose spines.

Allotype: Male (Fig. 1, H-M). Smaller than female, $3.57\text{mm} \times 1.57\text{mm}$. Carapace and 4th thoracic segment similar to those of female in outline; the former $\frac{3}{5}$ as long as entire body, with well-rounded median lobe, and the latter with distinct posterior border. Genital segment $\frac{1}{3}$ as long as carapace, $\frac{3}{4}$ as wide as long, of barrel-shape with slightly curved sides. It carries at each postero-lateral angle on ventral face a low, but broad, triangular ridge, tipped by 2 short plumose spinules, and, a short distance in front, 2 closely adjoining papillae, each bearing a similar spinule. Abdomen 2-segmented, as long and half as wide as preceding segment, from which it is distinctly bordered, and of uniform width throughout its length; anterior segment half as long as posterior one.

Claw of 2nd antennae short, unguiform, penultimate joint elongate, columnar. First maxillae stouter than in female, sharp and falciform. Second maxillipeds powerful, palm inflated, about half as broad as long, and on inner margin with an eminent molar-like process against which finger acts. Branches of sternal furca with apices more dilated than in female. Terminal spines on caudal rami much longer than those of female. In other points as in that sex.

Remarks: In the female having a strongly inflated, quadrilateral

genital segment and more or less elongate abdomen, the new species is nearly allied to *C. cossackii* Bassett-Smith^{1,3)}, *rapax* M.-Edwards⁴⁻⁷⁾, and *polycanthi* Gnanamuthu²⁾. It is different from the first 2 of these in

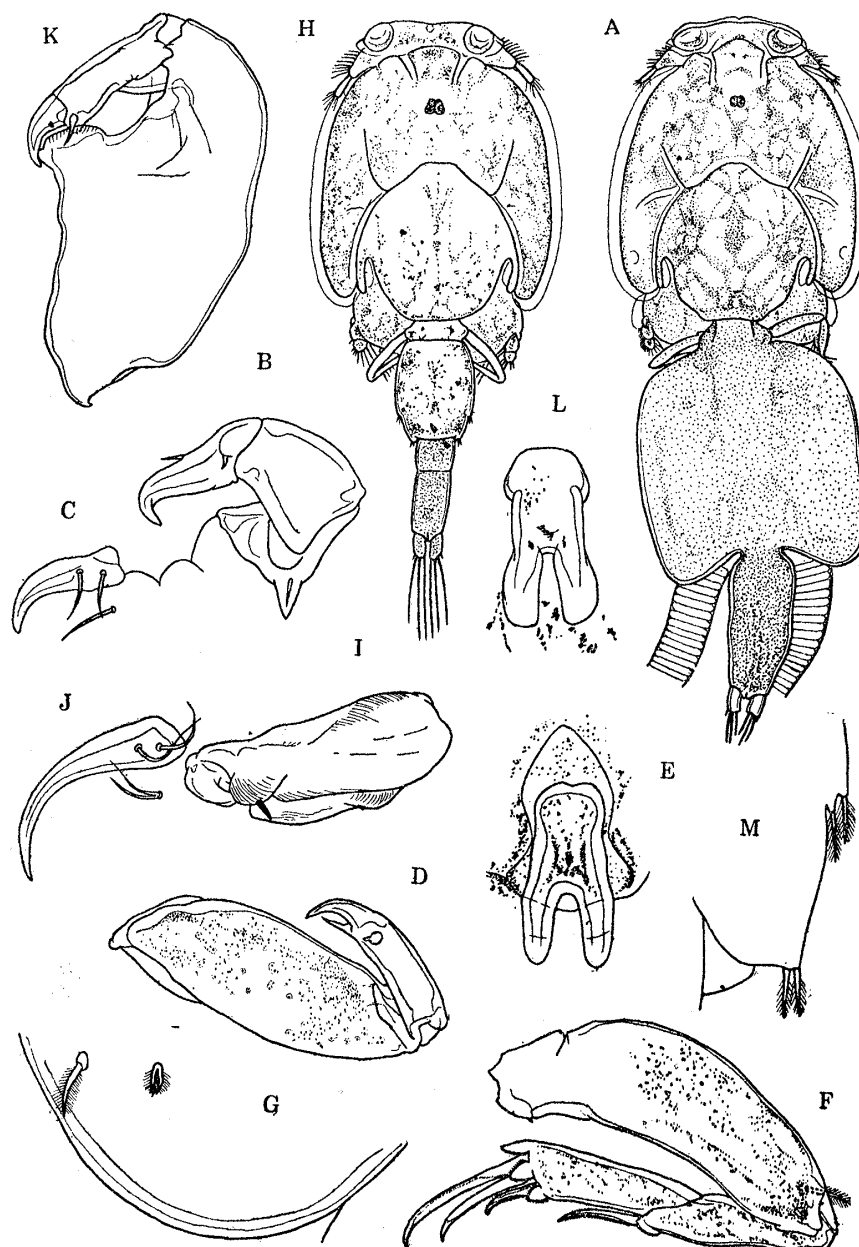


Fig. 1. *Caligus fulvipurpureus* n. sp. A-G, female; A, dorsal view; B, 2nd antenna; C, 1st maxilla; D, 2nd maxilliped; E, sternal furca; F, 4th leg; G, postero-lateral part of genital segment, ventral view; H-M, male; H, dorsal view; I, 2nd antenna; J, 1st maxilla; K, 2nd maxilliped; L, sternal furca; M, postero-lateral part of genital segment, ventral view. A $\times 12.6$, B-G, K $\times 74$, H $\times 16.8$, I, J, L, M $\times 108$.

the 4th legs lacking solitary spine on the outer margin of the terminal segment. It is discriminated, further, from *cossackii* by the 1-segmented abdomen of the female and by the genital segment of the male which is destitute of any wrinkles at the anterior end. Male of new species resembles that of *rapax* in the constitution of the posterior segments, but the female differs in having the genital segment relatively larger and entirely fused with the preceding one. From *polycanthi* the new species is distinguished by the facts that the named segment and the abdomen of the female are relatively longer and the abdomen of the male is 2-segmented.

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